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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,241	09/23/2005	Sven Mattison	P17211-US2	1739

27045 7590 10/22/2007

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EXAMINER	
GOODLEY, JAMES E	

ART UNIT	PAPER NUMBER
2817	

MAIL DATE	DELIVERY MODE
10/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/550,241	MATTISON, SVEN	
	Examiner	Art Unit	
	James E. Goodley	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-22 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 23 September 2005 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 9/23/2005.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-30 of **copending Application No. 10/550,827**. Although the conflicting claims are not identical, they are not patentably distinct from each other because a random sequence of bits generated from oscillating and amplifying means necessarily generates a random noise signal.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 6, 9, 14, 16, 17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by ***Sauer (US 6,064,257)***.

Regarding **claims 1, 5, 6, 9, 14, 16, 17 and 20,** Figs 5-7 of Sauer disclose a device for generating a random sequence of bits, comprising:

oscillating means [VCO 62] having an input terminal [M,N] for receiving a bias as input, the oscillating means comprising at least one oscillator amplifier [gm – Q27 and Q28];

amplifying means [gm – Q27 and Q28] comprising each the at least one oscillator amplifier and a corresponding at least one differential amplifier [61 – Q15 and Q16] coupled to each the at least one oscillator amplifier;

a load [Q29, Q30] coupled to the amplifying means and a power supply [Vcc]; the load being adapted to protect the amplifying means from interfering signals; and

a tail current source [Q17, Q18, R19, R20] coupled to the amplifying means and grounding means.

The load comprises cascoded transistors [Q29 and Q30] and resistors [R21-R23] coupled to the amplifying means.

The input terminals M, N for receiving a bias input is coupled to a noise source [50] for generating intrinsic noise, the noise source comprising a noisy amplifier cell [Q1-Q6] having amplifying means, a load [Q7-Q12] coupled to the amplifying means and supply, and a tail-current source [I1-I3] coupled to grounding means and to the amplifying means.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-4, 8, 10-13, 18, 19, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Sauer (US 6,064,257)***.

Regarding **claim 2**, Sauer fails to disclose the device according to claim 1, wherein the number of oscillator amplifiers is odd and greater than one, and the oscillator amplifiers are coupled in series.

However, it is well-known in the art to utilize a tuned ring oscillator (VCO) in random frequency generation applications.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Sauer to implement the VCO as a ring oscillator, as such an oscillator is conventional in the random frequency generation field.

Regarding **claims 3, 4, 8, 10 and 11**, the device of Sauer fails to disclose the device according to claim 1 wherein the load comprises PMOS or NMOS transistors and the amplifying means and the tail-current source comprise NMOS or PMOS transistors (respectively). As a necessary consequence of BJT implementation, Sauer does not disclose wherein the amplifying means further comprises a common-source amplifier.

However, the BJTs used in the load and tail current sources of Sauer are art-recognized equivalencies to the PMOS and NMOS transistors as claimed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Sauer to utilize the claimed NMOS and PMOS transistors as load and tail current source, as such implementation is an art-recognized equivalency to BJT implementation.

Regarding **claim 12**, the device of Sauer fails to disclose the device according to claim 11, "wherein the width-over-length ratio of the transistors of the amplifying means is at least 3 times the width-over-length ratio of the transistors of the tail-current source, and the width-over-length ratio of a second transistor pair of the load is at least 3 times the size of the width-over-length ratio of a first transistor pair of the load."

However, there appears to be no criticality in the applicant's disclosure as to the particular width-length ratio of the transistors. It is believed the ratio is simply a design choice for one of ordinary skill in the art to decide upon.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Sauer to utilize the particular width to length ratio of the claimed transistors, as such transistor sizes are a mere design choice.

Regarding **claim 13**, the device of Sauer fails to disclose the device according to claim 12, "wherein the width of the transistors of the amplifying means and the transistors of the second transistor pair of the load is in the range of 2.5-125 .mu.m, and the length of the transistors is in the range of 0.25-12.5 .mu.m; the width and the length of the transistors of the tail-current source and the transistors of the first transistor pair of the load are in the range of 0.25-12.5 .mu.m."

However, there appears to be no criticality in the applicant's disclosure as to the particular width-length ratio of the transistors. It is believed the ratio is simply a design choice for one of ordinary skill in the art to decide upon.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Sauer to utilize the particular width to length ratio of the claimed transistors, as such transistor sizes are a mere design choice.

Regarding **claim 15**, the device of Sauer fails to disclose the device of claim 1, further comprising, "a CCO having an input terminal coupled to the noise source."

However, voltage-controlled as well as current-controlled oscillators are both well-known in the art, for receiving a bias input to tune the frequency of oscillation.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Sauer to utilize a CCO, rather than a VCO, as a CCO is an art-recognized equivalency.

Regarding **claims 18 and 19**, the device of Sauer does not specifically disclose utilizing the random noise generator in a mobile radio terminal or mobile telephone.

However, as is notoriously well-known in the art, a random noise source may be utilized in such mobile applications as spread spectrum or other cryptographic forms of communication, in order to establish a secure communications link.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Sauer to utilize the random noise generator in a mobile application such as spread spectrum or other cryptographic forms of communication, in order to establish a secure communications link.

Regarding **claim 21**, the device of Sauer fails to disclose the device according to claim 10, "wherein the width-over-length ratio of the transistors of the amplifying means is at least 3 times the width-over-length ratio of the transistors of the tail-current source, and the width-over-length ratio of a second transistor pair of the load is at least 3 times the size of the width-over-length ratio of a first transistor pair of the load."

However, there appears to be no criticality in the applicant's disclosure as to the particular width-length ratio of the transistors. It is believed the ratio is simply a design choice for one of ordinary skill in the art to decide upon.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Sauer to utilize the particular width to length ratio of the claimed transistors, as such transistor sizes are a mere design choice.

Regarding **claim 22**, the device of Sauer fails to disclose the device according to claim 21, "wherein the width of the transistors of the amplifying means and the

transistors of the second transistor pair of the load is in the range of 2.5-125 .mu.m, and the length of the transistors is in the range of 0.25-12.5 .mu.m; the width and the length of the transistors of the tail-current source and the transistors of the first transistor pair of the load are in the range of 0.25-12.5 .mu.m."

However, there appears to be no criticality in the applicant's disclosure as to the particular width-length ratio of the transistors. It is believed the ratio is simply a design choice for one of ordinary skill in the art to decide upon.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Sauer to utilize the particular width to length ratio of the claimed transistors, as such transistor sizes are a mere design choice.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James E. Goodley whose telephone number is (571)-272-8598. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (571)272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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